UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,508	04/14/2004	Robert Anquetin	0275Y-000904	6457

27572 7590 01/26/2005

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER	
SHARP, JEFFREY ANDREW	

ART UNIT	PAPER NUMBER
3677	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/824,508	ANQUETIN, ROBERT	
	Examiner	Art Unit	
	Jeffrey Sharp	3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

[1] Claims 1-9 are pending.

Specification

[2] The disclosure is objected to because of the following informalities:

Paragraph 0004, line 1, should have the letter --a-- inserted before *'known wall anchor'*

Appropriate correction is required.

Claim Objections

[3] Claim 1 and 8 objected to because of the following informalities:

In claim 1, the phrase --said two shafts comprising:-- should be placed before *'a head shaft'* on line 4. There is a spacing typo *'axis , in'* on line 13. The space before the comma should be deleted.

In claim 8, line 2, the term *'pressed'* should be --stamped-- for convention.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

[4] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

[5] Claims 1-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Anquetin EPO-0378907 in view of Polos US-3,385,156, Seymour US-5,447,400, Harker US-RE 36,662.

Antquetin (Applicant) teaches substantially all of the claimed limitations, including a head shaft, transverse longitudinally end collar, screw nut shaft, plurality of longitudinal teeth having triangular shape, and a plurality of approximately longitudinal bars. One of ordinary skill in the art would appreciate that the teeth disclosed by Antquetin inherently possess a zone *capable* of plastic deformation (at the region from which they depend from the screw nut shaft), as all stamped metal can be *plastically deformed* by force.

However, Antqutin fails to disclose expressly, the teeth **tapering** towards the wall anchor's shaft axis, so as to provide a point-like structure at its insertion end.

Polos teaches that it is customary to provide circumferentially-spaced, triangular, serrated teeth (53) comprising a concave structure on wall anchors. The teeth aim to act as a cutting head so that an ordinary screwdriver (e.g., drill, phillips, slotted, allan, hex) may be used to bore the hole and eliminate the need for pre-drilling. In Col 1 lines 38-44, Polos discloses that 'sharpened **points on the ends of [the] anchors**' have been used to allow the anchors to be driven into the wall with a hammer. In Col 2 lines 47-54, Polos suggests that 'lips' (analogous to 'cutting edge'

disclosed by Applicant) are configured to act as a conventional drill bit tip. According to Polos (Col 3 line 69 - Col 4 line 2), variations in teeth are expected, so long as the formed hole allows the anchor to be readily inserted.

Seymour teaches a hollow anchoring structure comprising an integral pointed tip (5) that is inwardly **tapered**, and comprises flute-like structures (19-22) that move material similar to those of a drill bit. Engagement means (26) is further provided to the structure to enable a rotational *'drilling'* of the anchor with a conventional screwdriver or screwdriver bit. As seen in the prior art, it is customary to provide such engagement means on wall anchors, as this advantageously eliminates the need to redundantly swap a anchor pre-drill bit for a screwdriver bit. See, also Seymour Col 2 line 55 - Col 3 line 3. Should Applicant contend that the pointed tip structure taught Seymour is not possible with a stamped metal manufacturing process, see Bruström US-4,826,358 Col 1 lines 49-55, Col 2 lines 4-7, and Col 2 lines 29-36, which demonstrates that cost-reduction demands may drive a supplier to fabricate plastic parts out of sheet metal, and that formed sheet metal parts can be casted or molded using metal or polymers.

Lastly, Harker discloses a wall anchor to be advantageously used with various screw types (Col 2 lines 38-40), said anchor being provided with a tapered tip so as to prevent drywall blowout when the anchor is driven into wallboard by itself as a nail would be driven (Col 2 lines 57-70). Harker suggests a **tapered** portion on the insertion side of a hollow wall anchor, to smoothly penetrate the substrate without 'taking a chunk' of material out the blind side (Col 3 lines 51-64). See also, Tendler US-3,143,915, which suggests an advantageously tapered, frustoconical periphery at the insertion side of a wall anchor (10) to facilitate penetration.

The Examiner takes official notice that tapered portions are seen in most fasteners (e.g., staples, nails, screws) in order to provide a 'wedge effect', increase penetration force/area ratio, and generally improve insertion into a substrate. The wall anchor structure disclosed by Applicant might also be achieved by driving the structure taught by Anquetin or Polos into a harder wall substrate, as it is discussed above that stamped metal teeth may be deformable inward upon a driving force. In the instant case, compression stresses on the teeth from the wall (as the anchor is penetrating) could bend the teeth inward.

At the time of invention, it would have been obvious to one of ordinary skill in the art, to bend the cutting teeth of the wall anchor taught by Anquetin, in order to provide the advantages of a tapered penetration point (apparent from the teachings of the aforecited references), said advantages including providing the anchor with the ability to 1) be driven independent from the screw, and 2) be inserted into a wallboard without the need for pre-drilling, so long as the teeth function to provide a substantial clearance for the anchor to pass as suggested by Polos.

[6] Claims 1-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Anquetin EPO-0378907 in view of McSherry US-5,536,121.

Antquetin (Applicant) teaches substantially all of the claimed limitations, including a head shaft, transverse longitudinally end collar, screw nut shaft, plurality of longitudinal teeth having triangular shape, and a plurality of approximately longitudinal bars. One of ordinary skill in the art would appreciate that the teeth disclosed by Antquetin inherently possess a zone *capable* of plastic deformation (at the region from which they depend from the screw nut shaft), as all stamped metal can be *plastically deformed* by force.

However, Antqutin fails to disclose expressly, the teeth **tapering** towards the wall anchor's shaft, so as to provide a point-like structure at its insertion end.

McSherry teaches a plurality of tooth configurations at the end of a wall anchor where a tooth **tapers inward** toward the longitudinal axis of the anchor. The teeth have 'scooped' concave surfaces (Figures 5 and 7, Claim 4). Note that although McSherry illustrates only one tapered tooth, it is acknowledged that prior art anchors may have a plurality of teeth (Col 2 line 46-50). Also, note that McSherry further discloses engagement means (19) for rotationally driving the anchor (Col 4 lines 33-36).

At the time of invention, it would have been obvious to one having ordinary skill in the art, to modify the cutting teeth disclosed by Antquetin, to comprise the inwardly-bent, triangular, concave tooth structure suggested by McSherry, in order to further provide the teeth with centering means and to facilitate a 'shoveling' effect for improved removal of wall material when the anchor is rotated and used as a 'drill tip'.

Conclusion

[7] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows:

US 6837659 B2	USPAT	Oberkofler; Hermann	Figures 6 and 7
US 6602034 B2	USPAT	Wakai; Takao et al.	
US 5911550 A	USPAT	Popp; Franz et al.	
US 5749687 A	USPAT	Kilgore, III; John C.	
US 5725341 A	USPAT	Hofmeister; Oskar	
US 5544980 A	USPAT	Seegmiller; Ben L.	Figure 4
US 5472303 A	USPAT	Palm; Erich et al.	
US 5297909 A	USPAT	Tsay; Leu-Wen et al.	
US 4990042 A	USPAT	Szayer; Geza J. et al.	

US 4826358 A	USPAT	Brustrom; Bertil	
US 4696423 A	USPAT	Ryan; John L.	
US 4617692 A	USPAT	Bond; Michael E. et al.	
US 4402637 A	USPAT	Seghezzi; Hans-Dieter et al.	
US 4353673 A	USPAT	Lesowsky; Joseph	
US 4293258 A	USPAT	McKewan; Arthur J.	
US 4285264 A	USPAT	Einhorn; Ruediger	
US 4223587 A	USPAT	Deutschenbaur; Paul	
US 4123640 A	USPAT	Ballantyne; David B.	
US 4055051 A	USPAT	Finney; James Lee	
US 4047462 A	USPAT	Hurtig; Carl R.	
US 3778755 A	USPAT	Marks; Richard L.	
US 3765296 A	USPAT	Fischer; Artur	
~~US 3385156 A~~	~~USPAT~~	~~POLOS CONSTANTINE D~~	
US 2762252 A	USPAT	JOHN KARITZKY	
US 2269646 A	USPAT	BURKE JAMES P	
US 3437004 A	USOCR	PACHARIS GEORGE H	
US 3398627 A	USOCR	ANTON TENDLER	
US 3316796 A	USOCR	YOUNG JACOB H	
US 3298645 A	USOCR	MORRIS KENNETH R	
US 3279301 A	USOCR	ARTUR FISCHER	
US 3143915 A	USOCR	TENDLER HELEN E	Figure 1 (10)
US 3123370 A	USOCR	Unander	
~~US 2762252 A~~	~~USOCR~~	~~JOHN KARITZKY~~	
US 2762119 A	USOCR	JACKSON JOHN E	
US 2559281 A	USOCR	FREDERICK CROESSANT GEORGE	
US 2171985 A	USOCR	MUSHET JAMES C	
US 2017421 A	USOCR	POST LAWRENCE M	
~~US 3316796 A~~	~~USPAT~~	~~YOUNG JACOB H~~	
US 5147166 A	USPAT	Harker; Brian G.	
US 4157677 A	USPAT	Deutschenbaur; Paul et al.	
US 5529449 A	USPAT	McSherry; Thomas W. et al.	
US 5308203 A	USPAT	McSherry; Thomas W. et al.	
US 4702654 A	USPAT	Frischmann; Albert et al.	
~~US 3279301 A~~	~~USPAT~~	~~ARTUR FISCHER~~	
US 2406536 A	USPAT	GELPCKE ALFRED W	
US 6609866 B2	USPAT	Huang; Pan-Ching et al.	Figures 1 and 3
US 5692864 A	USPAT	Powell; Kenneth Simpson et al.	
US 5067864 A	USPAT	Dewey; George G. et al.	
US 4986710 A	USPAT	Kovarik; Kerry M.	
US 3888156 A	USPAT	Fima; Raoul	

[8] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Sharp whose telephone number is (703) 305-0426. The examiner can normally be reached on 7:30 am - 5:00 pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (703) 306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAS

ROBERT J. SANDY
PRIMARY EXAMINER